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A Note on the Diet of the Cape Barren Goose.—Although nowhere abundant the Cape Barren Goose (*Cereopsis novaehollandiae*) has a wide natural distribution including islands off the southern coast of Australia from the Furneaux Group in Bass Strait to the Recherche Archipelago, Western Australia.

Dr. H. J. Frith in *Waterfowl in Australia* records that the Cape Barren Goose feeds by grazing on vegetable matter predominantly grasses (*Poa poaformis*, *Lolium perenne*, *Avena* sp., *Stipa* sp., *Danthonia* sp. and *Hordeum* sp.) and some dicotyledonous leaves and seeds of clovers, medics, herbs and succulents. Frith states that the only information on the food actually eaten comes from 44 stomachs, collected during a short shooting season on islands of the Furneaux Group in April 1965. Grasses made up 65 per cent of the total bulk food and 20 per cent of the stomachs sampled contained some sedge (*Juncus* sp.).

During a survey of offshore islands in the Recherche Archipelago in January 1975 several small groups of Cape Barren Geese were seen on Cull and Figure of Eight Islands near Esperance. The birds were very wary and it was not possible to observe them feeding and thereby identify food plants. It was possible however to collect small samples of geese faeces from a bare rock surface on Figure of Eight Island, a small low island of approximately 283 hectares well vegetated with low shrubs.

As these faeces appeared to contain viable plant seeds they were brought to Canberra and several seedlings, all similar in appearance, were raised. Recognising that the plants could be frost tender one was taken to Sydney and planted in a coastal garden. This proved to be a wise precaution as although the plants in Canberra survived the first winter they were killed in 1977. The plant in Sydney flowered in October 1978 and was identified as *Myoporum insulare* (syn. *M. adscendens*).

The writer had collected this species on Figure of Eight Island occurring just above high water level on a sheltered beach in a small cove. It was fruiting heavily at the time, bearing small green fleshy fruit which were apparently palatable to the geese. *M. insulare* is common in coastal areas in Western Australia, South Australia, Victoria, Tasmania and New South Wales.

Myoporum is regarded horticulturally as difficult to raise from seed. Whilst the small number of seeds contained in the goose faeces did not allow any firm conclusions to be drawn the fact that they germinated at all is interesting and suggests that studies on the effect of the digestive system of the Cape Barren Goose on seed viability might be worthwhile.

Finally the experimental observation reported here is of botanical and zoological interest as it suggests that Cape Barren Geese could be effective seed dispersal agents for at least one species of *Myoporum* and also identifies one component of the natural diet of *Cereopsis novaehollandiae*.

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Jewel beetles as pollinators of *Melaleuca pauperiflora* F. Muell between Eucla (W.A.) and Koonalda (S.A.).—On March 5, 1979, I examined large numbers of the jewel beetle, *Stigmodera (Themognatha) lieros* Gehin (Buprestidae) feeding on nectar and pollen from flowering bushes (1.5-2.5 m high) of a short-leaved (almost terete) species of *Melaleuca*

(Myrtaceae). Observations were undertaken between Koonalda, S.A. (31° 28'S, 129° 57'E) and Eucla, W.A. (31° 43'S, 128° 53'E) with the majority of observations made east of Eucla near the W.A.-S.A. border, during 1250 to 1420 hrs (WST). Air temperatures varied between 32°C and 34°C.

Examination of specimens of *Melaleuca lanceolata* Otto and *M. pauperiflora* F. Muell. housed in the W.A. Herbarium (PERTH), revealed that the *Melaleuca* specimens collected by the author near Eucla, were intermediate between the two species; they resembled *M. pauperiflora* in leaf morphology but were akin to *M. lanceolata* in the inflorescence.

M. pauperiflora occurs in the southern regions of S.A. and W.A. while *M. lanceolata* is a widespread species occurring mostly in coastal areas from S.E. Queensland, N.S.W. to Victoria, S.A. and W.A. In their review of the genus *Melaleuca* in South Australia, Carriek and Chorney (*J. Adel. Bot. Gard.*, 1, 1979: 281-319), mention that *M. lanceolata* exhibits marked variation in the leaves and fruits, especially in size (p. 297). The leaves often show a tendency to become thicker and somewhat terete; Carriek and Chorney (*loc. cit.*) state that this variation may be due to hybridization with *M. pauperiflora* or adaptation to an arid habitat.

Specimens of the *Melaleuca* collected from Eucla have been deposited in the W.A. Herbarium (Hawkeswood 185) and the name *M. pauperiflora* will be used for purposes of this note.

Although flowering of *M. pauperiflora* was sporadic between Koonalda and Eucla, those bushes in flower were at their peak flowering stage. *M. pauperiflora* was clearly the dominant species in the area and the only one in flower.

Jewel beetles were not found on every flowering bush examined. Large plants (c. 2.5 m high) in full bloom appeared to be favoured by the buprestids. Feeding and copulation readily occurred on flowers at the tops of plants. Flight readily occurred and beetles were observed to land on nearby bushes after taking flight, as a result of the author's disturbances. Although most beetles had a dusting of pollen on the head and pronotum, no pollen was carried on the posterior regions of the body. No other insects apart from a few individuals of another jewel beetle, *Stigmodera (Castiarini) mustelamajor* Thomson were visiting the flowers.

In the absence of other insects on the flowers, it appears likely that jewel beetles are the pollinators of this plant in the Eucla-Koonalda region. *Melaleuca* flowers are, in general, not adapted for bird or mammal pollination. The flowers of *M. pauperiflora* possess the syndrome of entomophily (beetle pollination). The flowers are cream in colour with a strong honey-like odour and the anthers and stigmas are exposed.

Jewel beetles probably play important roles in pollination of native plants (mostly small-flowered Myrtaceae) in the arid and semi-arid areas of Australia. It is in these areas that many Buprestidae appear better adapted to the harsh climatic conditions experienced during summer than many other insect groups containing diurnal nectar/pollen feeders. This has resulted in them occupying a dominant position in the feeding niche on flowers of the Myrtaceae (e.g. *Eucalyptus*, *Melaleuca* and *Thryptomene*) growing in the arid and semi-arid areas of Australia (Hawkeswood and Peterson, unpublished data). In the wet, montane and coastal areas of Australia, this feeding niche is shared more evenly with other insects such as tachinid flies (Tachinidae), clerid beetles (Cleridae), flower chafers (Scarabaeidae), click beetles (Elateridae), butterflies (e.g. Papilionidae and Lycaenidae) and native honey-bees (Apidae) (Hawkeswood, *Aust. Zool.*, 19, 1978: 257-275; Hawkeswood, 1975-1979, pers. obs.).

These observations are provided since little has been published on insect pollination of Myrtaceae.

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